Threaded thermowell or for push-in/weld-in (fabricated)
Version per DIN 43772 form 2, 3, 2G, 3G
Models TW35-2, TW35-3, TW35-4, TW35-5

Applications
- Chemical industry, process technology, apparatus construction
- For low and medium process loads

Special features
- Version per DIN 43772
- Model TW35-2: Form 2 (straight)
  Model TW35-3: Form 3 (tapered)
  Model TW35-4: Form 2G (straight)
  Model TW35-5: Form 3G (tapered)
- With integrated neck tube
- Model TW35-3, TW35-5: fast-response design

Description
Each thermowell is an important component of any temperature measurement point. It is used to separate the process from the surrounding area, thus protecting the environment and operating personnel and keeps aggressive media, high pressures and flow rates from the temperature sensor itself and thereby enables the thermometer to be exchanged during operation.

Based on the almost limitless application possibilities, there are a large number of variants, such as thermowell designs or materials. The type of process connection and the basic method of manufacture are important design differentiation criteria. A basic differentiation can be made between threaded and weld-in thermowells, and those with flange connections.

Furthermore, one can differentiate between fabricated and solid-machined thermowells. Fabricated thermowells are constructed from a tube, that is closed at the tip by a welded solid tip. Solid-machined thermowells are manufactured from barstock.

The TW35 series of fabricated threaded or weld-in thermowells are suitable for use with numerous electrical and mechanical thermometers from WIKA.

Due to their design to DIN 43772, these thermowells for low and medium process loads are suitable for use in the chemical industry, process technology and equipment manufacture.
Standard version

Thermowell materials
Stainless steel 1.4571

Process connection
Male thread G ½ B, G 1 B, M20 x 1.5, ½ NPT or without thread for push-in/weld-in

Connection to thermometer
M24 x 1.5 union nut

Bore size
Ø 6.1 mm, Ø 7 mm, Ø 9 mm

Insertion length U₁
To DIN 43772 or customer specification

Overall length L
Model TW35-4: Insertion length U₁ + 145 mm
Model TW35-5: Insertion length U₁ + 147 mm

Max. process temperature, process pressure
Depending on
- Load diagram DIN 43772
- Thermowell design
  - Dimensions
  - Material
- Process conditions
  - Flow rate
  - Density of medium

Options
- Other dimensions and materials
- Quality certificates
- Thermowell calculation to Dittrich/Klotter is recommended in critical applications as a WIKA engineering service.

For further information, see Technical Information IN 00.15 “Strength calculation for thermowells”.

Dimensions in mm

Legend:
E = Process connection
K₁ = Length of male thread
L = Overall length
M = Neck tube length (min. 60 mm)
N = Connection to thermometer
S₁ = Tip thickness
Ø d₁ = Bore size
Ø F₁ = Thermowell diameter
Ø F₃ = Neck tube diameter
S₂ = Wall thickness
U₁ = Insertion length

WIKA data sheet TW 95.35 · 06/2012
<table>
<thead>
<tr>
<th>Ø d₁</th>
<th>Ø F₁</th>
<th>S</th>
<th>S₁</th>
<th>E</th>
<th>Weight in kg L = 305 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>11</td>
<td>2</td>
<td>3</td>
<td>G ½ B, G 1 B, M20 x 1.5, ½ NPT</td>
<td>0.23</td>
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<tr>
<td>7</td>
<td>12</td>
<td>2.5</td>
<td>3.5</td>
<td>G ½ B, G 1 B, M20 x 1.5, ½ NPT</td>
<td>0.35</td>
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<tr>
<td>9</td>
<td>14</td>
<td>2.5</td>
<td>3.5</td>
<td>G ½ B, G 1 B, M20 x 1.5, ½ NPT</td>
<td>0.23</td>
</tr>
<tr>
<td>6.1</td>
<td>12</td>
<td>2.5</td>
<td>5</td>
<td>G ½ B, G 1 B, M20 x 1.5, ½ NPT</td>
<td>0.23</td>
</tr>
</tbody>
</table>

**Suitable stem lengths of mechanical dial thermometers**

<table>
<thead>
<tr>
<th>Connection type</th>
<th>Stem length l₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>S, 3, 4, 5</td>
<td>l₁ = L - 10 mm or l₁ = U₁ + M - 10 mm</td>
</tr>
<tr>
<td>2</td>
<td>l₁ = L - 30 mm or l₁ = U₁ + M - 30 mm</td>
</tr>
</tbody>
</table>

**Ordering information**

Model / Thermowell form / Thermowell material / Process connection / Connection to thermometer / Insertion length U₁ / Total length L / Dimension of pipe / Assembly with thermometer / Certificates / Options

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